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NEWSLETTER OF THE LONDON CHAPTER,
ONTARIO ARCHAEOLOGICAL SOCIETY
P.O. Box 2574, Station B, London, ON. N6A 4G9

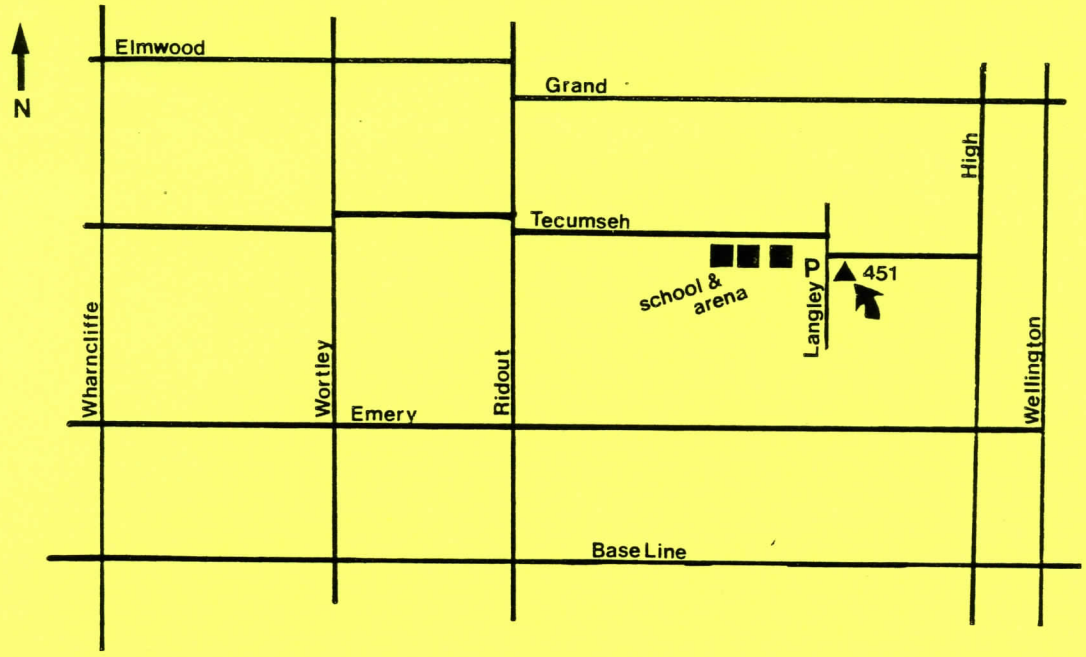
December, 1991

91-8

SEASON'S GREETINGS! COME CELEBRATE WITH US AT THE ANNUAL LONDON CHAPTER CHRISTMAS PARTY

This year's Christmas Party is at Neal and Nina's, 451 Tecumseh Street East, on Saturday, December 7th, starting at 6 PM. People coming to the party are asked to phone Neal and Nina at 432-2165, to arrange what they can contribute to the party. Everyone is welcome! Don't forget, the Chapter's annual business meeting will also be held during the party.

Next Month (Jan. 9th): Grace Rajnovich will discuss her work on the Rock Art of northern Ont.



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ANNUAL RATES

Individual.....$15.00
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EXECUTIVE REPORT

1992 MEMBERSHIP FEES ARE NOW DUE!!!!

Yes, its that time of year again, time to dig out your wallets and re-enlist for another year of interesting **KEWA**'s, first crack at our occasional publications, and just simply supporting one of the most vibrant OAS Chapters in the Province!!! You will find enclosed a membership dues envelope for the 1992 year, your assistance in returning it with your new year dues as soon as possible would be greatly appreciated. Please note, membership fees haven't changed for most this year, with individuals at $15.00, family at $18.00, and institutional at $21.00. You can also enclose your Main body dues for 1992, if you so wish, which this year are $28.00 for an individual, $34.00 family, $55.00 institutional, an $400.00 life. If you are not a member of the Provincial OAS in 1992, you are then automatically a subscriber to the London Chapter, rather than a member. Your Chapter fees for 1992 are then $17.00.

At the time of preparing this Newsletter for publication, several people had offered themselves up as candidates for the 1992 Chapter Executive. This includes Pat Weatherhead, running for President, Chris Ellis for Vice-President, Harri Matilla for Treasurer, and Tom Arnold for Secretary. Currently, we do not have anyone formally nominated for the position of Director, if you are interested please notify Neal Ferris of the nominating committee. As well, members should know that any position on the Executive can be contested through an election, so don't be shy if you really want to be on the Executive. Mind you, we haven't had an election for over ten years, so it'll take some time to figure out how to run one! Deadline for all nominations is at the Annual Chapter Business Meeting at the Christmas Party, on the evening of December 7th.

Finally, the Chapter will be forming a Conflict of Interest Guidelines Committee in the new year, to develop guidelines for members representing the Chapter on the Executive, and in the various functions the Executive appoints people to. If you are interested in this committee, please contact Pat.

SOCIAL REPORT

Once more, a reminder to all that the Christmas Party is at Neal and Nina's this year, see the map on the cover for further information. On other fronts, Members should know that our annual Chapter Member's Night will be held on February 13th. Anyone interested in show and telling, or just chatting for a few minutes, are invited to do so on that night.

The OAS main body and the London Chapter have formally agreed to participate in the CAA conference to be held here in London next May. A possible book launch, and an expanded Society Expo display are currently being planned.

EDITOR'S NOTE

This month's article by Chris Ellis and Brian Deller expands on some of the material Chris discussed at his Speaker Night last month. We also enclose some muses from Rosemary and Lud Prevec on the process of sticking a longhouse pole in the ground. Enjoy!

A Small (But Informative) Early Archaic Component At the Culloden Acres Site, Area B

Chris J. Ellis and D. Brian Deller

Introduction

During the summer of 1990, excavations were carried out at three small Early Paleo-Indian, fluted point, sites in southwestern Ontario: Murphy (AeHk-1), Bolton (AfHj-89), and Culloden Acres (AfHj-90). While the primary goal of these excavations was to investigate the Paleo-Indian components on those sites, the project also recovered evidence of later prehistoric occupations. Especially notable was the recovery of evidence from all three sites of use during the Early Archaic of ca. 10,000 to 8000 B.P. (see Ellis et al. 1990).

The most informative Early Archaic evidence was recovered from one of the two extensively investigated areas at Culloden Acres, termed Area B (Ellis and Deller 1991). While this occupation was small spatially and in terms of artifact yield, it does provide some significant information on this poorly known period of southern Ontario prehistory. In particular, the Culloden Acres Area B data: 1) reinforces the diagnostic value of certain uniface tool forms for recognizing early sites in the absence of point forms; and 2), provides additional information on continuity and change between the preceding Paleo-Indian and the succeeding Early Archaic occupations of the eastern Great Lakes area. These important implications are the subject of this paper.

The Culloden Acres Site

The Culloden Acres site is located primarily in a ploughed field just northwest of the modern town of Komoka, Ontario. The site is apparently situated on a sand dune remnant which overlooks on the southwest what was, prior to modern land alterations, an extensive area of low marshy ground. Archaeological investigations at Culloden Acres included relatively extensive excavations at two of as many as four areas of Paleo-Indian activity at the site, termed Areas A and B (Figure 1). Area A proved to represent a very specialized Early Paleo-Indian activity area, as it yielded an tool assemblage heavily dominated by classic small trianguloid end scrapers (21/35 or 60% of the assemblage assignable to specific tool types) and a debris assemblage consisting almost exclusively of a large number of scraper/uniface retouch flakes (see Deller and Ellis 1991; Frison 1968) removed during the rejuvenation of the working edges of such end scrapers. The remaining tools included largely simple retouched/denticulated flakes and micro-piercers or "gravers." In addition to the Paleo-Indian materials, Area A yielded evidence of use during the Late, Middle and, as represented by a single bifurcate-based point, Early Archaic.

In contrast to Area A, the Area B Early Paleo-Indian component consisted almost solely of biface manufacturing debris including a large number of tiny retouch flakes from biface

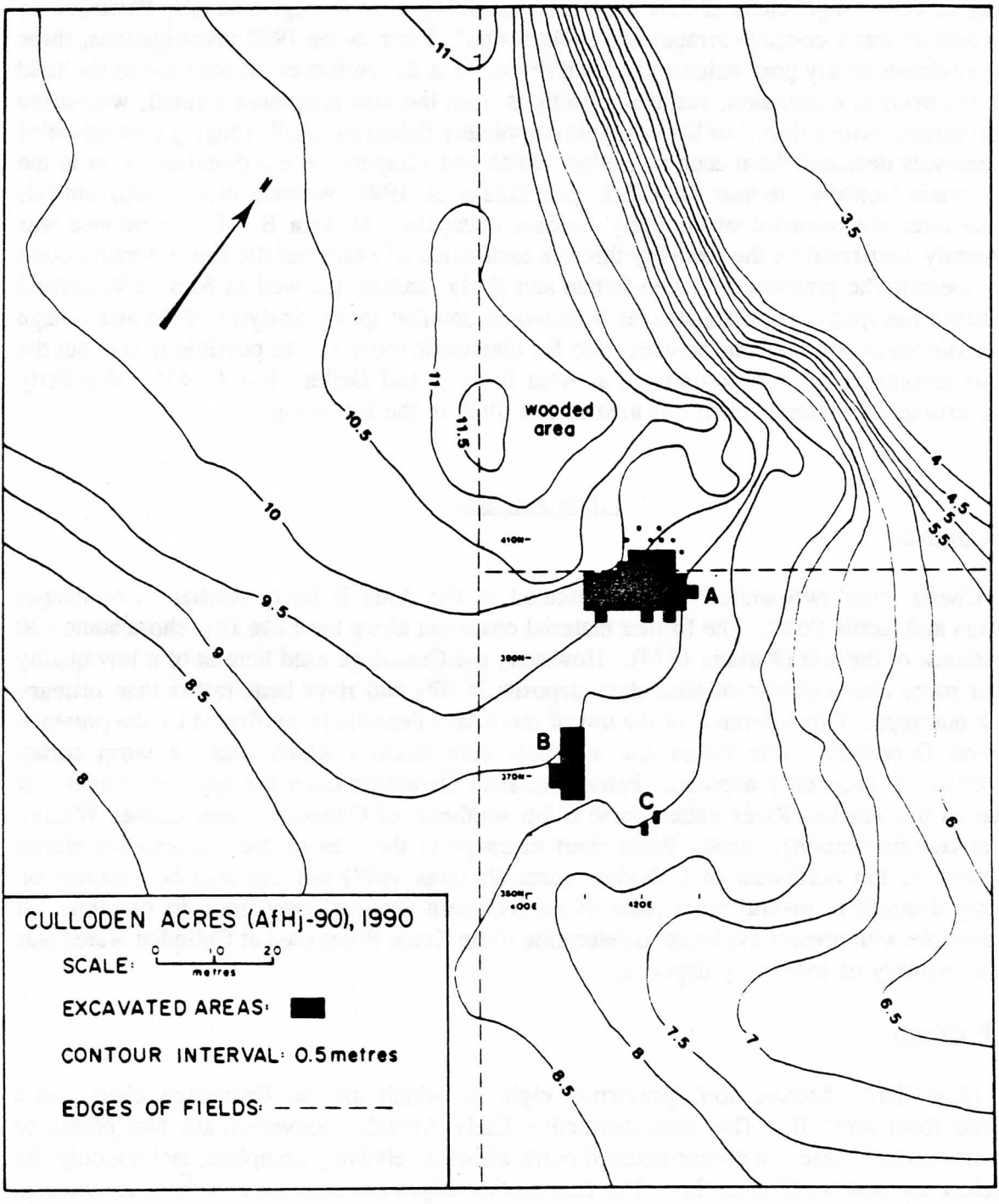

Figure 1: Map of the Culloden Acres Site.

finishing as well as eight channel flake segments derived in point fluting. The only Paleo-Indian tool recovered was a concave scraper or "spokeshave." Prior to the 1990 investigations, there was no evidence of any post-Paleo-Indian activity at Area B. However, at the start of the field season just prior to excavation, surface collections from the area recovered a small, well-made oval end scraper with a dorsal or back surface completely flaked by small, roughly parallel-sided flake removals detached from each side edge. Such end scrapers were a dominant form at the Early Archaic Nettling site near Lake Erie (see Ellis et al. 1991; Wortner et al. 1990) and this led us to infer the presence of an Early Archaic occupation at Area B. This inference was subsequently confirmed by the recovery through excavation of characteristic Early Archaic point forms. Despite the presence of Paleo-Indian and Early Archaic (as well as Middle Woodland and Historic European) materials at Area B, based on detailed spatial analyses of the assemblage and a consideration of the stone sources used for diagnostic tools, it was possible to sort out the materials assignable to each component at Area B (Ellis and Deller 1991:41-43). The Early Archaic artifactual material from this area is described in the following.

Lithic Artifacts

Raw Materials

Cherts from two sources are represented in the Area B Early Archaic assemblage: Onondaga and Kettle Point. The former material crops out along the Lake Erie shore some 130 km southeast of the site (Parkins 1977). However, the Onondaga used here is of a low quality which is more characteristic of secondary deposits in tills and river beds rather than primary bedrock outcrops. This inference of the use of secondary deposits is confirmed by the presence of several Onondaga waste flakes and a pebble core nucleus which retain a worn cortex characteristic of secondary deposits. Pebbles of such Onondaga chert are apparently available as close as the Thames River valley some 6 km southeast of Culloden Acres (James Wilson: personal communication). Kettle Point chert outcrops in the area of the southeastern Huron basin some 50 km northwest of Culloden Acres (Janusas 1984) but can also be obtained on secondary deposits in several other areas of southwestern Ontario away from the outcrops. It is not possible with present evidence to determine if the Kettle Point used at Culloden Acres was from the primary or secondary deposits.

Tools/Preforms

Nine Early Archaic tools/preforms, eight of which are on Onondaga chert, were recovered from Area B. The most distinctive Early Archaic recoveries are two points or fragments thereof. One is a corner-notched point which is relatively complete, lacking only the base below the notches (Figure 2a). The fore-section edges are serrated and there is evidence the point was basally thinned on one face and that at least the notches were lightly ground. This specimen conforms quite closely to points assignable to the Kirk Corner-Notched Cluster which is well-dated in the southeastern United States to between 9500 and 8900 B.P. (Chapman 1976, 1980). The second point, which is the only tool or preform on Kettle Point chert, is represented by a segment of the very tip end. Nonetheless, it is complete enough to say that it had serrated blade edges and is probably also a "Kirk Corner-Notched Cluster" example. Besides these two

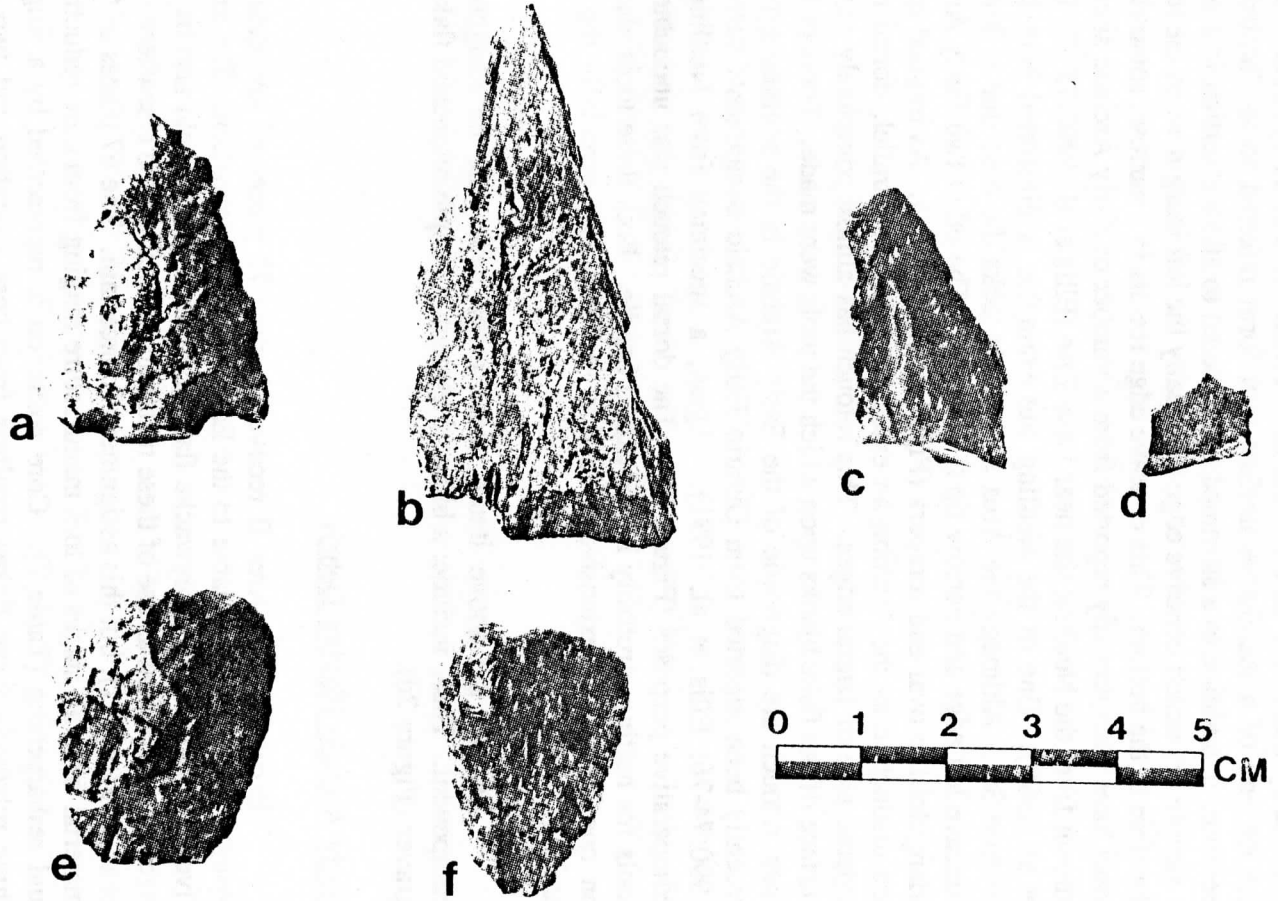

FIGURE 2: Early Archaic Tools From Culloden Acres.

points, the collection also includes a biface of a size and morphology which clearly indicates it was a preform for such points (Figure 2b).

There are also three other tools which are Early Archaic diagnostics but which are not necessarily diagnostic of Kirk Corner-Notched Cluster components alone. These include first, the tip end of a distinctive uniface tool form referred to as "hafted concave side scrapers" because, in addition to a stemmed base altered to allow insertion in a socketed haft, they exhibit a steeply retouched concave edge on usually the left margin when the tool is viewed in plan with the stem to the bottom. This concave edge results in a narrow, somewhat pointed tip end. Such tools have been recently reported from a number of Early Archaic sites in Ontario, and are best known from the Nettling site near Lake Erie (Ellis et al. 1990:75-76; Ellis et al. 1991; Wortner et al. 1990). One of the Nettling site examples is illustrated here for comparative purposes (Figure 3a). Although the Area B example lacks the base due to breakage, it clearly has the concave left edge and narrow tip (Figure 2c). The other two Early Archaic diagnostics include trianguloid to oval end scrapers (Figure 2e,f; Table 1). As implied earlier, these end scrapers are distinctive as they exhibit an extensive, roughly parallel, dorsal retouch originating at the tapered side or lateral edges. This retouch has almost completely removed the original dorsal surface of the flake blanks upon which the tools were made. Tools of this morphology and with such retouch are diagnostic of the Early Archaic in the southeastern United States and have recently been reported from Ontario Early Archaic components such as Nettling (Ellis et al. 1990:74-76; Ellis et al. 1991). Again, a specimen from Nettling is illustrated here for comparative purposes (Figure 3b). The dorsal retouch was undoubtedly applied to shape the tools for hafting, probably in a socketed handle. Both these tools also exhibit ventral retouch, on one item quite extensively, to thin the butts and especially the thicker bulbar area, for hafting.

Besides the above items, three other items can be assigned to the Early Archaic component. These include: a biface fragment, a simple retouched flake, and a micro-piercer or graver (Figure 2d).

Early Archaic Flaking Debris

Excavations at Area B recovered some 71 pieces of low quality Onondaga and Kettle Point chert debris assignable to the Early Archaic occupation. The excavations also recovered five slate and one sub-greywacke flake fragments which could also be associated with the Early Archaic component as use of these materials is documented elsewhere in the Early Archaic (Ellis et al. 1991:17-21), but this assignment is uncertain. The 67 pieces of Onondaga debris includes material from all stages of tool manufacture ranging from core reduction down to tool finishing and resharpening (Table 2). Core reduction is represented by a single pebble core remnant, three relatively large flakes resulting from core alteration and two angular/blocky pieces of "shatter." The core, the variable form of the core reduction flakes, and the blocky fragments, indicate the use of non-standardized, "random" core reduction strategies. Tool finishing and resharpening is represented by biface thinning and finishing flakes as well as five uniface retouch flakes. In contrast to the Onondaga debris, Kettle Point debris is much rarer and only four flakes were recovered. This rarity in contrast to the Onondaga mirrors the Kettle Point's minor representation among the tools (only one point tip). All the Kettle Point flakes are relatively

Table 1: End Scraper Variables.*

Variable	Tool #1 (F.C. #79)	Tool #2 (F.C. #96)
Length	32.8	31.9
Width	26.3	23.2
Maximum Thickness	7.3	7.0
Bit Width	24.5	23.2
Bit Depth	5.0	5.3
Bit Thickness	7.2	6.4
Lateral Edge Divergence	30-35°	25-30°
Bit Angle	70-85°	65-75°

*all measurements in mm except where noted.

Table 2: Culloden Acres Area B: Early Archaic Debris.

TYPE	Onondaga	Kettle Point	Totals
Biface Thinning Flakes	4 (80.0%)	1 (20.0%)	5 (100.0%)
Biface Finishing Flakes	25 (96.2%)	1 (3.9%)	26 (100.1%)
Uniface Retouch Flakes	5 (100.0%)	0 (0.0%)	5 (100.0%)
Fragments	27 (93.1%)	2 (6.9%)	29 (100.0%)
Core Reduction Flakes	3 (100.0%)	0 (0.0%)	3 (100.0%)
Shatter/Blocky Fragments	2 (100.0%)	0 (0.0%)	2 (100.0%)
Pebble Core	1 (100.0%)	0 (0.0%)	1 (100.0%)
Totals	67 (94.4%)	4 (5.6%)	71 (100.0%)

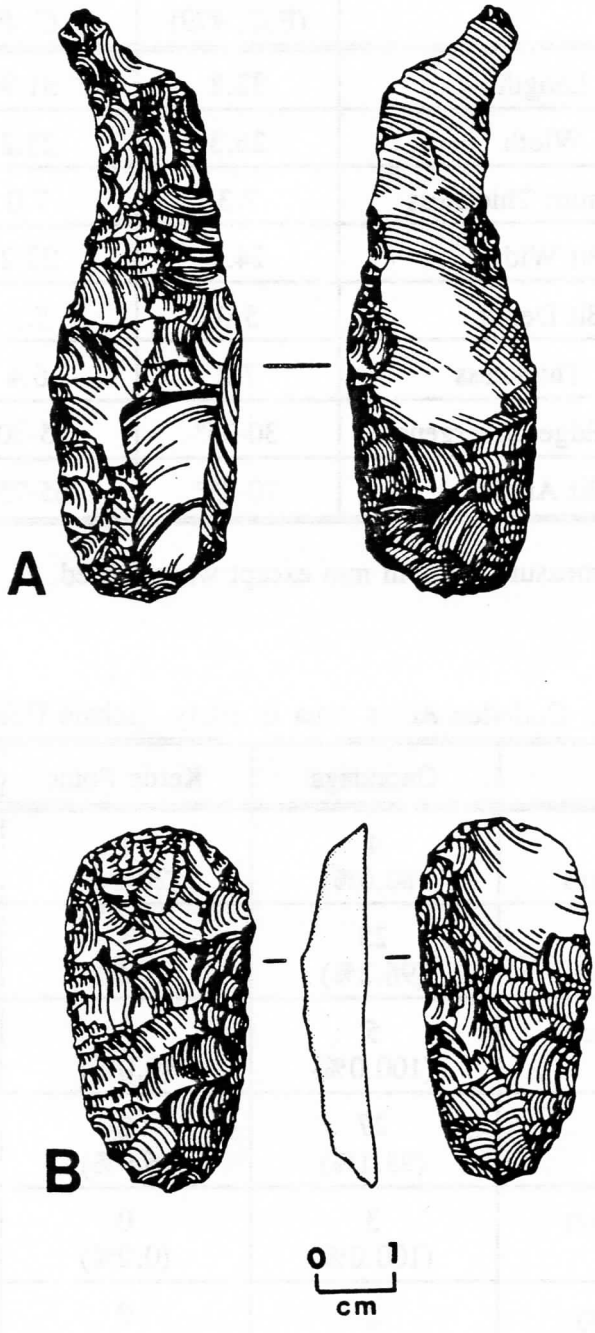

Figure 3: Dorsal and Ventral Views of Hafted Concave Scraper (A) and Oval End Scraper (B), Nettling Site.

small and seemingly result solely from the final stages of tool manufacture or resharpening. There is no evidence of the reduction of cores on this material. The only two items assignable to the reduction of specific tool classes are from biface reduction. This incidence is also consistent with the fact the single Kettle Point tool recovered is a biface.

Spatial Distributions

Culloden Acres was dug in relation to a main grid of two metre squares. Within each two metre unit, the northeast one metre subquare was screened through 1/8" mesh while the remaining three subsquares were passed through 1/4" mesh. While flaking debris was retained by one metre unit, and although the area was ploughed, all tools/preforms were piece-plotted. This piece-plotting involved screening only material from one area (essentially the size of a shovel) at a time and the plotting of items to the centre of the removed area. The distribution of the piece-plotted items is shown on Figure 4.

Because the material was piece-plotted it was possible to construct a density map of the tools/preforms using the method of a "moving template" (see Whallon 1984:228). This method involved counting all items within a specified distance of particular, evenly spaced, grid points. The counts are then plotted at those grid points and density contours are drawn linking the points with the same densities of artifacts.

At Culloden, the density map was constructed counting all items within a two metre radius of grid points spaced at one metre intervals. Since the site was ploughed, and thus, individual items could be moved somewhat, only densities of two items or above were contoured. The resulting plot suggests the Early Archaic materials cluster in two areas, labelled A and B on Figure 5. These clusters encompass all the tools/preforms from the area excepting the hafted concave scraper fragment which is located equidistant between the two clusters and thus, is not easily assignable to one or the other clusters. Cluster A includes the two points as well as the relatively complete preform while Cluster B includes the end scrapers, the micro-piercer, the retouched flake and the miscellaneous biface fragment. In short, the point manufacturing seems to be spatially separated from the other tools recovered.

As for the debris, plotting of the combined Kettle Point and Onondaga materials reveals the densest concentration coincides with Tool Cluster A or the preform/point cluster (Figure 6). It is possible to suggest that this is at least partially a product of the fact biface reduction produces larger amounts of debris and indeed, the biface flakes occur in greatest frequencies in the vicinity of the northern tool cluster (Figure 7). It is also notable that the only two Kettle Point biface reduction flakes also came from the north of the excavated area (one in each of the two northernmost excavated units) and this is consistent with the fact the only Kettle Point chert tool, the biface point tip, also came from this northern area. In line with the fact the southern concentration or Cluster B contained largely unifaces, is the fact most of the uniface retouch flakes also came from the southernmost area of the grid (Figure 8). In terms of other debris, and particularly that from the primary stages of manufacture (a core, core reduction flakes and shatter/blocky fragments), this material does not seem to closely coincide with the tool concentrations but rather tends to be peripheral to such areas (Figure 9). It is possible that such larger sharp debris was deliberately tossed aside to keep it away from the areas of other

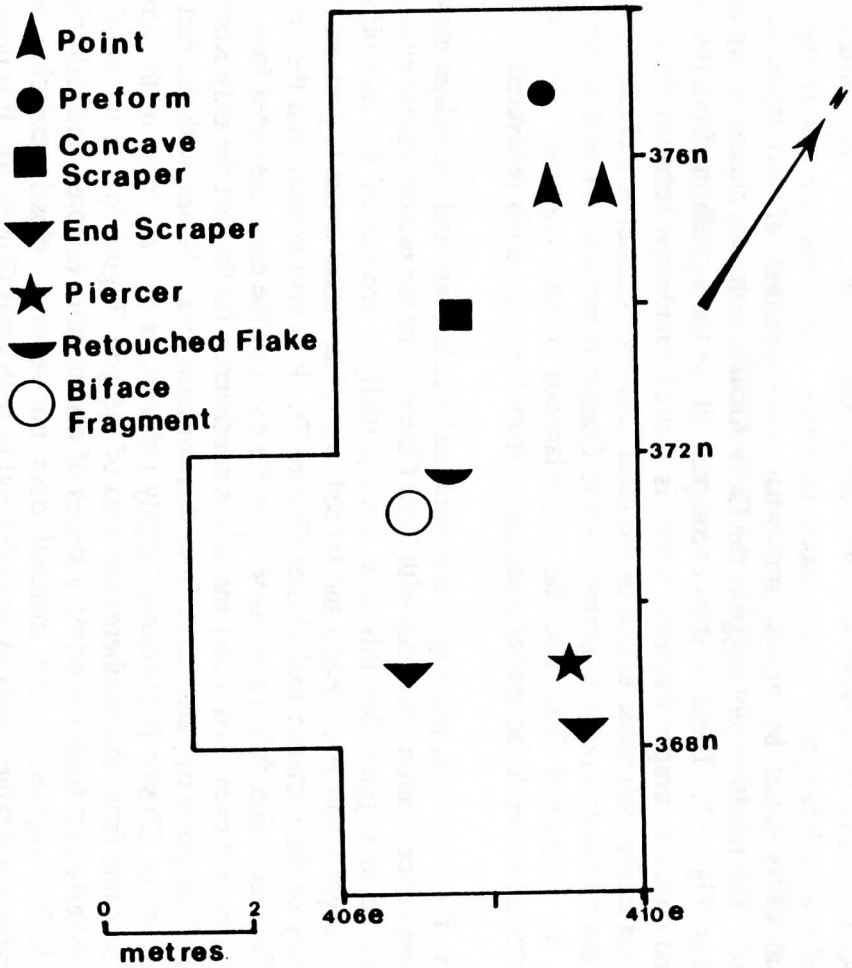

Figure 4: Distribution of Early Archaic Tools and Preform, Culloden Acres, Area B.

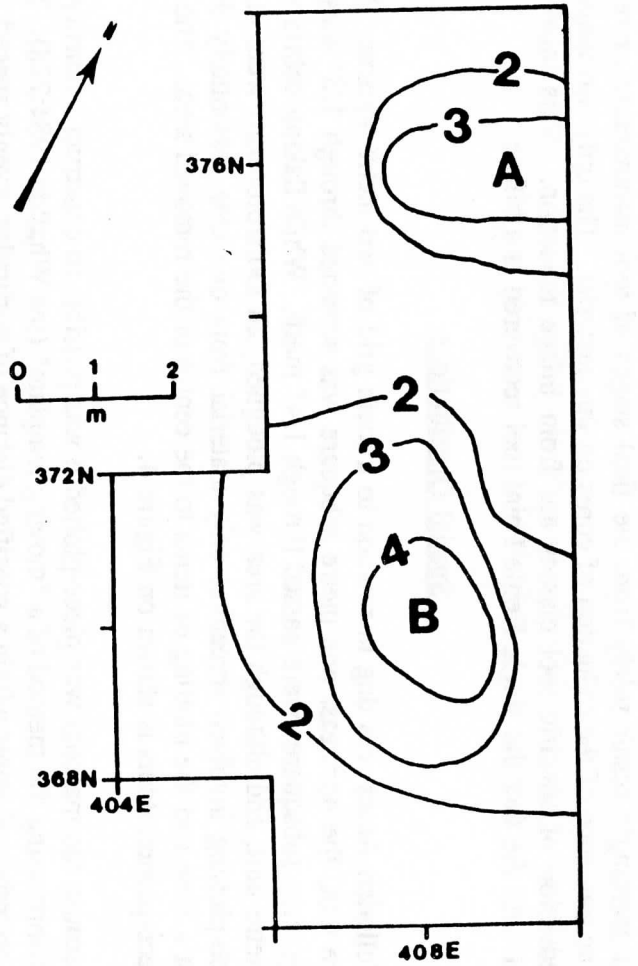

Figure 5: Density Map of Early Archaic Tools and Preform, Culloden Acres, Area B.

activities such as biface reduction in Cluster A or uniface use suggested by the tools and uniface retouch flakes recovered from the area of Cluster B. With one exception, the slate fragments all came from the southernmost part of the excavation unit and may be associated with the Early Archaic tool concentration in that vicinity. However, since there is evidence of Middle Woodland occupation in the same area, this Early Archaic association is tenuous.

Discussion

As noted above, evidence of Early Archaic occupation was recovered during this project not only from Culloden Areas A and B but also, at the two other Paleo-Indian sites excavated in this project, namely Bolton and Murphy. This consistent co-occurrence seems to be due to more than just chance and provides strong evidence for continuity in choice of site locations for use from Paleo-Indian to Early Archaic times at least in this area of southwestern Ontario. However, beyond this basic inference, the Culloden Area B material related to Kirk Corner-Notched Cluster occupation (ca. 9600 to 8900 B.P.) provides other significant information.

First, the Area B occupation has yielded a suite of artifacts suggesting Early Archaic activities at the area involved point manufacture and use of distinctive, probably use-sensitive tool forms such as end scrapers, concave scrapers and micro-piercers. These are exactly the same kinds of tools/activities recovered from the combined Area A and B Paleo-Indian assemblages at Culloden Acres. Assuming these kinds of tools are functionally equivalent between Paleo-Indian and Early Archaic times, these data suggest not only that their was continuity through time between the two in the selection of certain locations for use, but also, that the nature of that use involved the same activities. Note that this does not mean that Paleo-Indian settlement systems as a whole were the same as Early Archaic ones; only that use of this general vicinity was the same. It can also be stressed that the spatial distributions of the Area B Early Archaic material indicate these items clusters in two areas: one at the north end including evidence largely of point manufacture and one near the south end which included end scrapers, a retouched flake and a micro-piercer. This spatial division of artifact forms is exactly that seen between the Paleo-Indian components at Culloden Areas A and B. In short, the Early Archaic occupants seem to have spatially organized activities along the same lines as that seen during Early Paleo-Indian use of the site.

Translating the kinds of artifacts recovered from the Early Paleo-Indian and Early Archaic components into behavioural inferences is difficult. The small size of both assemblages does suggest only short term use of the site by small social groups. Moreover, the relatively specialized assemblage suggests these were not residential camps but instead, relatively specialized processing or extraction camps. The points and point-making debris suggest hunting activities or at least, as indicated by the manufacturing debris, preparation for hunting activities, were important activities in both the Paleo-Indian and Early Archaic occupations. Also, if hafted end scrapers are hide-processing tools as wear studies often suggest (e.g. MacDonald 1968:114; Storck and Tomenchuk 1990:78), then game processing and perhaps, as represented by the retouched flakes, game butchering, were also important activities. Therefore, it is possible to suggest both the Paleo-Indian and Early Archaic occupations represent small hunting camps occupied by small social units or task groups. Presumably, these groups had ventured

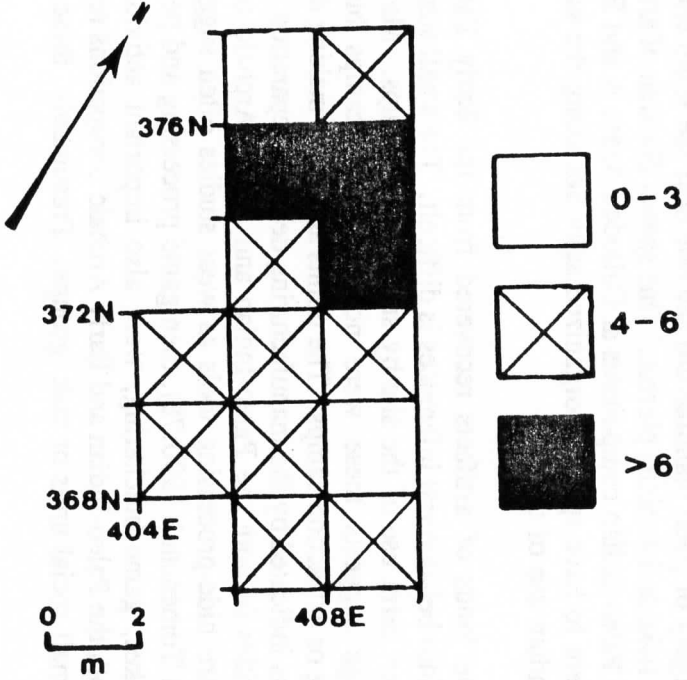

Figure 6: Density Map of Early Archaic Debris, Culloden Acres, Area B.

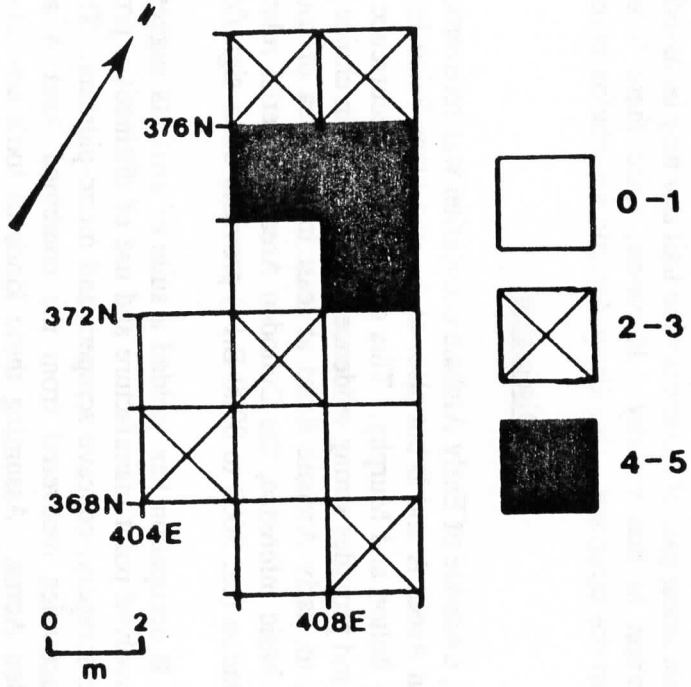

Figure 7: Density Map of Biface Flaking Debris, Culloden Acres, Area B.

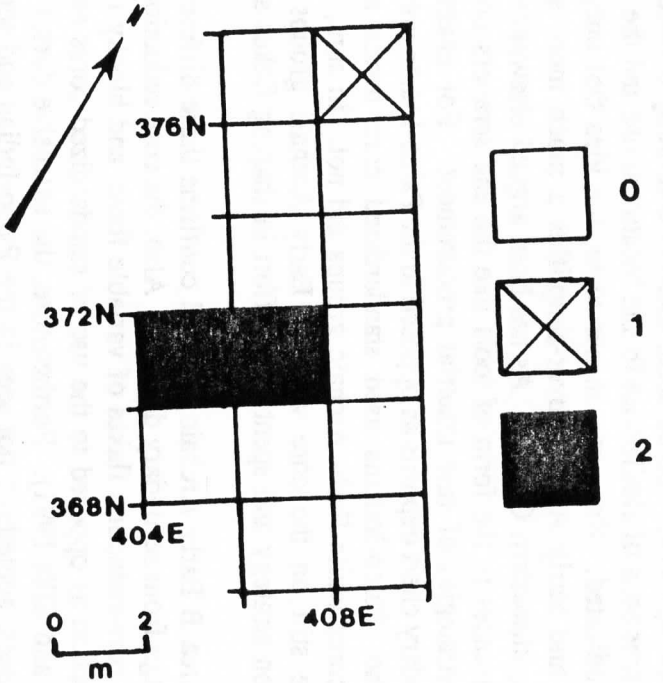

Figure 8: Density of Uniface Retouch Flakes, Culloden Acres, Area B.

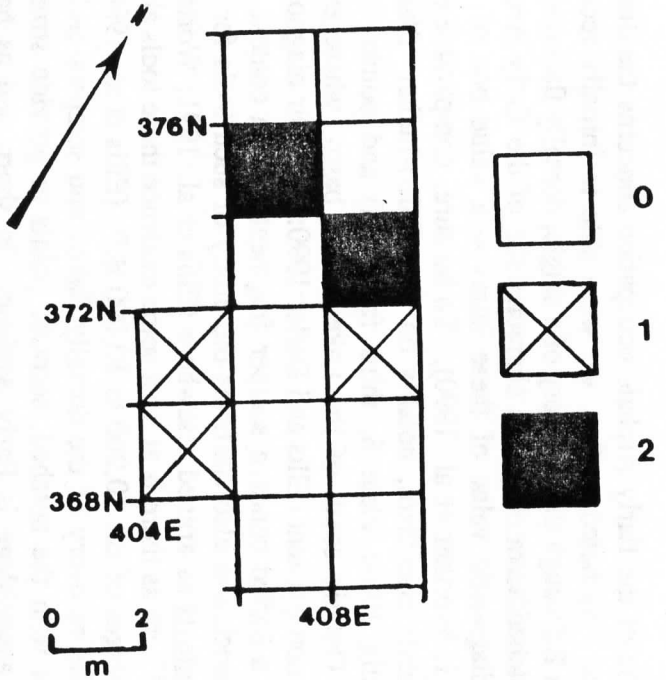

Figure 9: Density Map of Primary Flaking Debris, Culloden Acres, Area B.

forth from residential camps located at some distance away to procure certain resources in the area.

A second implication of the Early Archaic occupation concerns the diagnostic value of the Early Archaic unifaces. As noted earlier, we were able to initially recognize an Early Archaic component at Area B through the recovery of a single, dorsally flaked end scraper. The subsequent recovery of notched/serrated points characteristic of the Early Archaic provided a confirmatory test of the diagnostic value of these items -- a value one of us had stressed elsewhere (Ellis et al. 1991; Wortner et al. 1990). To be sure, comparable end scrapers are known in other early contexts elsewhere, notably on Late Paleo-Indian "Plano" materials in northern Ontario (e.g. Julig 1984: Plate 6, third from left) and points west (e.g. Judge 1973:292). However, in Ontario south of the Lake Huron basin, where evidence of such "Plano" material is rare to non-existent (Ellis and Deller 1990:61), their diagnostic value seems assured. The recovery of a hafted concave scraper fragment from a context suggesting Kirk Corner-Notched Cluster association also confirms the utility of such tools for recognizing site use in temporally early contexts as argued elsewhere (Ellis et al. 1991; Wortner et al. 1990). "Early contexts" is stressed here as there is at least some evidence these tools also occur in Late Paleo-Indian Hi-Lo assemblages of ca. 10,200 to 10,000 B.P. (Ellis et al. 1990:75). It is also worth inserting here that the recovery of the dorsally flaked end scrapers and hafted concave scraper fragment combines with the notched, serrated points to provide strong confirmatory evidence that the Area B assemblage is Early Archaic. In short, and as has been stressed elsewhere (Ellis et al. 1991:23), notched/serrated points per se are not necessarily all Early Archaic in affiliation as they have been recovered in Middle Archaic contexts (e.g. Lovis 1989).

As a final series of implications, some have argued that outside of the appearance of notched points in the Early Archaic, that there is little to separate Paleo-Indian and Early Archaic (e.g. Gardner 1974, 1977). To be sure, there is continuity between Paleo-Indian and Early Archaic as our discussions of similarities in site locational use and the spatial organization of activities have just indicated. However, in our view, the idea that only notched point use separates Paleo-Indian and Early Archaic over-simplifies a much more subtle and complex situation -- at least in southwestern Ontario. As has been argued elsewhere (Ellis et al. 1991), not only are there differences in the form of tools like the end scrapers noted above but also, there are contrasts in strategies of raw material procurement. For example, Early Archaic groups often used secondary chert deposits as opposed to the Paleo-Indian preference for primary bedrock deposits. Also, Paleo-Indians used standardized core forms and procedures for removing flakes from cores while Early Archaic groups did not. In sum, Paleo-Indians often pre-shaped items while still on the core whereas Early Archaic groups employed a more haphazard core reduction strategy and spent more effort in shaping flakes after detachment.

The Culloden Area B Early Archaic material confirms these differences. The primary material used is Onondaga from secondary deposits. Also, the core reduction debris, consisting of a pebble core, some core reduction flakes of variable form, and blocky fragments, indicates a more haphazard reduction as opposed to the use of standardized cores seen on Early Paleo-Indian sites (see Deller and Ellis 1991). Furthermore, the extensive dorsal flaking seen on the Early Archaic end scrapers, something not seen in the Paleo-Indian end scraper assemblage at Area A, indicates more post-detachment shaping of tool blanks in the Early Archaic component.

The use of standardized cores by Paleo-Indians meant the unifacial tool blanks were shaped on the core and required little post-detachment modification to make them serviceable as tools.

Overall, therefore, the small amount of Early Archaic material from Culloden has greatly increased our knowledge of this material in Ontario or substantiated inferences made from other Early Archaic assemblages -- we can not have enough of such confirmatory evidence. Together with data from other sites which will undoubtedly be investigated in the future, the Culloden Acres Area B data will help us build more realistic characterizations of the changes, or lack thereof, from Paleo-Indian to Early Archaic in the area. In turn, these data will eventually allow us to address the reasons for the contrasts and continuity between Paleo-Indian and Early Archaic.

Acknowledgments: Excavation at the sites noted herein was made possible by a research grant (#410-90-1642) from the Social Sciences and Humanities Research Council of Canada to C. Ellis, D.B. Deller and B. Warner. We thank Darcy Fallon for bringing the Culloden Acres site to our attention, and Lawrence Jackson, Dr. Paul Karrow, Dr. David Nobes and collectively, the large field crew, for their assistance in the field. A special vote of thanks is offered to Mr. and Mrs. Charles Bolton, and Mr. and Mrs. Edwin Bolton, for allowing us to excavate on their properties, for backfilling our excavation units, and for numerous other courtesies. Drawing of the Nettling site artifacts reproduced here as Figure 3 was carried out by Janie Ravenhurst and was made possible by an Internal Research Grant awarded to Ellis by the Faculty of Social Science, University of Western Ontario.

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IROQUOIAN POST PLACEMENT: THE SLOVENIAN PERSPECTIVE

Rosemary and Ludvik Prevec

Introduction

The dominant features on archeological native sites in southern Ontario are the post molds that mark the location of palisades and dwellings. Clearly the early native people had considerable facility in putting posts up to 20 cm in diameter into many different soil types. Despite the obvious importance of this activity there seems to be no real information as to how this task was actually carried out. On recent trips to a farming region of western Slovenia in northern Yugoslavia, we observed a comparable activity that might have some relevance to Ontario.

Observations in Slovenia

On the small farms located in the Karst valleys of Slovenia, the hay and bean crops are traditionally dried by wrapping them on long poles which have been placed vertically into the ground. These drying poles or '*osternice*' are placed a few metres apart in rows marching across the fields as seen in the accompanying photograph.

Drying Crops on Upright Poles in Cerknisko Jezero, Slovenia

At one time so many *osternice* dotted the fields that they blocked the view from village to village. The *osternice* themselves are the trunks of evergreens, 4 to 7 metres in length, sharpened to a point at the base and with branches trimmed to stubs to provide a perch on which to hang the drying crop. The *osternice* are removed from the ground each fall after the drying

is complete and replaced the next summer when a new crop is ready to be dried. The relevant question therefore becomes, "How does the Slovenian farmer place these large poles into the ground year after year?"

The process involves a simple principle which could have been passed through many generations and cultures or could indeed have been independantly evolved by different peoples at different times. The basic idea is to use an easily handled tool to create a hole into which the large post or *osternica* can be inserted. In Slovenia this tool is an iron rod. While we saw different shapes and sizes employed, in general the rod is some one to one and a half metres in length and about three cm in diameter. In use, the rod is thrown vertically into the soil and then wiggled from side to side in a number of directions to create a cone-shaped hole. The rod is extracted from the hole and the process of throwing and wiggling repeated in exactly the same spot until a hole of the desired depth and width has been created. The sharpened bottom end of the *osternica* is then thrown into the hole and the *osternica* tamped into place by hitting the lower branch projections. The addition of a small amount of water to the soil in a hole made in clay, prior to inserting the *osternica*, ensures that the *osternica* will be effectively cemented into place when the water dries. With practice and appropriate skills it takes one man as little as 30 seconds to insert one large post into the ground by this procedure.

Relevance to Ontario

While the prehistoric Indian cultures of Ontario lacked the metal bar, they could easily have devised and used a comparable tool to do the job. A sharpened hardwood stake of sufficient size to provide weight but still capable of being handled easily could suffice. Alternatively a shorter sharp stick which could be driven into the ground by continuous hammering and wiggling would also produce the same result.

The essential features of a hole made by this method are the roughly cone-shaped profile of the original opening and the zone of soil compression that might surround the opening. The compression zone would not be a visible feature of the post mold and may not be preserved for any significant length of time, even for more sensitive detection methods, depending on the soil type. In general however the cross-section of a southern Ontario post mold has the features expected from this method of post installation.

The absence of any historical record as to the method used by Indians to put posts into the ground would suggest that the technique was known to Europeans or deemed to be so obvious that no particular attention was paid to it. While it may be difficult, if not impossible, to prove that the method described in this paper was in fact employed in Ontario, the very fact that the procedure is so effectively used in Slovenia today makes it of some interest as a possibility.